# DESIGN-MANUFACTURING INTERFACE VIA A UNIFIED MODEL

## ABSTRACT

Subtleties of advanced fabrication processes and nano-scale phenomena associated with integrated circuit miniaturization have exposed the insufficiencies of design rules. Such inadequacies have adverse impact on all parts of the integrated circuit creation flow where design rules are used. In addition, segregation of the various layout data modification steps required for deep sub-micrometer manufacturing are resulting in slack and inefficiencies. This invention describes methods to improve integrated circuit creation via the use of a unified model of fabrication processes and circuit elements that can complement or replace design rules. By capturing the interdependence among fabrication processes and circuit elements, the unified model enables efficient layout generation, resulting in better integrated circuits.